

WHAT IS CLAIMED IS:

1. A drive socket for a fastener which is driven by a hex-key driver, comprising:

5 three rounded lobes of substantially equal radius positioned about a center of the fastener, the lobes being located substantially equidistant from the center and approximately 120° apart from each other;

three flat surfaces positioned about the center of the fastener, each flat surface being located substantially opposite one of the lobes and substantially equidistant from the center of the fastener; and

10 recesses located between the lobes and the flat surfaces.

2. The drive socket of claim 1, wherein each of the lobes projects inward toward the center of the fastener.

15 3. The drive socket of claim 1, wherein each of the recesses forms a substantially smooth transition between a lobe and a flat surface.

4. The drive socket of claim 1, wherein the lobes are positioned to provide a first clearance between an apex of each of the lobes and corresponding

surfaces on a hex-key driver inserted into the drive socket, and the flat surfaces are positioned to provide a second clearance between the flat surfaces and corresponding surfaces on the hex-key driver.

5           5.       The drive socket of claim 4, wherein:

the first clearance is approximately 0.04 mm (0.0015 inch); and

the second clearance is approximately 0.10 mm (0.0038 inch).

10           6.       The drive socket of claim 1, wherein the recesses are sized to provide sufficient clearance such that the corners of a hex-key driver inserted into the drive socket do not contact a wall of the drive socket.

7.       A drive socket for a fastener which is driven by a hex-key driver, comprising:

15           three rounded lobes of substantially equal radius positioned about a center of the fastener, the lobes being located substantially equidistant from the center and approximately 120° apart from each other, each of the lobes projecting inward toward the center of the fastener, the lobes being positioned to provide a first clearance of approximately 0.04 mm (0.0015 inch) between an apex of each of the  
20   lobes and corresponding surfaces on a hex-key driver inserted into the drive socket;

three flat surfaces positioned about the center of the fastener, each flat surface being located substantially opposite one of the lobes and substantially equidistant from the center of the fastener, the flat surfaces being positioned to provide a second clearance of approximately 0.10 mm (0.0038 inch) between the flat surfaces and corresponding surfaces on the hex-key driver inserted into the drive socket; and

recesses located between the lobes and the flat surfaces, each of the recesses forming a substantially smooth transition between a lobe and a flat surface, the recesses being sized to provide sufficient clearance such that the corners of a hex-key driver inserted into the drive socket do not contact a wall of the drive socket.

8. A drive socket for a fastener which is driven by a hex-key driver, comprising:

a first set of three lobes of substantially equal radius positioned about a center of the fastener, the lobes within the first set being substantially equidistant from the center of the fastener and approximately 120° apart from each other, each of the lobes of the first set including a flat surface which is located adjacent and substantially tangential to the radius portion of the lobe;

a second set of three lobes of substantially equal radius positioned about the center of the fastener, the lobes within the second set being substantially equidistant from the center of the fastener, approximately 120° apart from each other and approximately 60° apart from the lobes of the first set; and

recesses located between the lobes of the first set and the lobes of the second set.

9. The drive socket of claim 8, wherein each of the lobes of the first set and each of the lobes of the second set project inward toward the center of the fastener.

10. The drive socket of claim 8, wherein the radii of the lobes of the first set and the radii of the lobes of the second set are substantially equal.

11. The drive socket of claim 8, wherein the distance between the lobes of the first set and the center of the fastener and the distance between the lobes of the second set and the center of the fastener are substantially equal.

12. The drive socket of claim 8, wherein each of the recesses forms a substantially smooth transition between a lobe of the first set and a lobe of the second set.

13. The drive socket of claim 12, wherein the recesses are sized to provide sufficient clearance such that the corners of a hex-key driver inserted into the drive socket do not contact a wall of the drive socket.

14. The drive socket of claim 8, wherein the flat surfaces of the lobes in the first set are positioned substantially 120° apart from each other.

15. The drive socket of claim 8, wherein:

5 the lobes of the first set are positioned to provide a clearance between a first apex of each of the lobes of the first set and corresponding surfaces on a hex-key driver inserted into the drive socket; and

the lobes of the second set are positioned to provide a clearance between a second apex of each of the lobes of the second set and corresponding surfaces on the hex-key driver inserted into the drive socket, the clearance between the second apices of the second set of lobes and the corresponding surfaces on the hex-key driver being substantially equal to the clearance between the first apices of the first set of lobes and the corresponding surfaces on the hex-key driver.

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15 16. The drive socket of claim 15, wherein:

the clearance between the first apices of the first set of lobes and the corresponding surfaces on the hex-key driver is approximately 0.04 mm (0.0015 inch); and

the clearance between the second apices of the second set of lobes and the corresponding surfaces on the hex-key driver is approximately 0.04 mm (0.0015 inch).

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17. A drive socket for a fastener which is driven by a hex-key driver, comprising:

5 a first set of three lobes of substantially equal radius positioned about a center of the fastener, the lobes within the first set being substantially equidistant from the center of the fastener and approximately 120° apart from each other, each of the lobes of the first set including a flat surface which is located adjacent and substantially tangential to the radius portion of the lobe, the flat surfaces of the lobes of the first set being positioned substantially 120° apart from each other, each  
10 of the lobes of the first set projecting inward toward the center of the fastener, the lobes of the first set being positioned to provide a clearance of approximately 0.04 mm (0.0015 inch) between an apex of each of the lobes of the first set and corresponding surfaces on a hex-key driver inserted into the drive socket;

15 a second set of three lobes of substantially equal radius positioned about the center of the fastener, the lobes within the second set being substantially equidistant from the center of the fastener and approximately 120° apart from each other and approximately 60° apart from the lobes of the first set, each of the lobes of the second set projecting inward toward the center of the fastener, the lobes of the second set being positioned to provide a clearance of approximately 0.04 mm  
20 (0.0015 inch) between an apex of each of the lobes of the second set and corresponding surfaces on a hex-key driver inserted into the drive socket; and

recesses located between the lobes of the first set and the lobes of the second set, each of the recesses forming a substantially smooth transition between a lobe of the first set and a lobe of the second set, the recesses being sized to provide

sufficient clearance such that the corners of a hex-key driver inserted into the drive socket do not contact a wall of the drive socket.

18. The drive socket of claim 17, wherein the radii of the lobes of the first  
5 set and the radii of the lobes of the second set are substantially equal.

19. The drive socket of claim 17, wherein the distance between the lobes  
of the first set and the center of the fastener and the distance between the lobes of  
the second set and the center of the fastener are substantially equal.